

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-18 and 20-32 are pending in the above-identified application. Claims 1, 4, 6, 7, 12, 15, and 18 are currently amended. Claims 28-32 are newly added. Support for the amendments to Claims 1, 7, and 15 and for new Claims 28-31 can be found in numbered paragraph [0036] of page 5 of the specification and in Figures 1 and 4, for example. Support for the amendments to Claims 6, 12 and 18 is self-evident. Support for new Claim 32 can be found in original Claim 1, numbered paragraphs [0005-0006] of page 2 of the specification, and in Figure. 1, for example. No new matter is added. Claim 19 was canceled in a previous amendment without prejudice or disclaimer.

In the outstanding Office Action, Claim 6 was rejected under 35 U.S.C. § 112, second paragraph as indefinite; Claims 1-3, 5-9, 13-17, and 25-27 were rejected under 35 U.S.C. § 102(b) as anticipated by EP 985 342, hereafter “EP '342”; Claims 15, 16, and 27 were rejected under 35 U.S.C. § 102(b) as anticipated by EP 779 027, hereafter “EP '027”; and Claims 15, 16, 22, and 27 were rejected under 35 U.S.C. § 102(b) as anticipated by Wosmek (U.S. Patent No. 2,894,733, hereafter “Wosmek”). Claims 4, 12, and 18 were allowed, and Claims 10, 11, 20, 21, 23, and 24 were indicated as reciting allowable subject matter.

Applicant notes with appreciation the indication that Claims 4, 12, and 18 are allowed and that Claims 10, 11, 20, 21, 23, and 24 recite allowable subject matter. Applicant further notes that Claim 23, added in the previous response, depends from allowed Claim 4. Therefore, Applicant presumes Claim 23 to be allowed.

Regarding the rejection of Claim 6 as indefinite, Claim 6 is amended to depend from Claim 5 rather than Claim 1. Accordingly, Applicant respectfully submits that the rejection is overcome.

Regarding the rejection of Claims 1-3, 5-9, 13-14, and 25-26 as anticipated by EP '342. That rejection is respectfully traversed by the present response.

Amended Claim 1 recites, in part:

a wall extending away from said floor...

said wall further including a first side and a second side positioned on opposing sides of the enclosure, said first side and said second side being disposed substantially parallel to a direction of travel of the mixing apparatus,

each of said sides being disposed at dissimilar angles relative to said floor.

Accordingly, the first and second sides are disposed substantially parallel to the direction of travel of the mixing apparatus and at dissimilar angles relative to the floor. One benefit of this arrangement is the reduction of the amount of power required to turn an auger inside the claimed mixing apparatus.

As discussed in numbered paragraphs [0005-0006] of the specification, the oblong shape of the vertical mixer container at the top edge, combined with the cone shape of the auger, creates a wide cavity for the reception of feed at the ends of the container, and a narrower cavity at the sides of the container (as seen from the direction of travel). During the mixing of feed inside the container, the auger rotates at a constant speed, urging the feed materials around the inside circumference of the container. When the feed encounters the narrower cavities at the sides, a restriction point is created, thus forcing a mixing action as well as allowing the auger knives to further cut or process the feed materials. As the feed moves into the wider cavities at the ends of the container, the feed increases in velocity and falls down into the cavity. The resulting rotary motion of the feed is that of alternating restriction and release, slow and fast, rising and falling movement, which causes the mixing and processing of the materials. The present inventor has discovered that by making the walls in the narrower cavities at dissimilar angles relative to the floor, the above described

configuration requires less horsepower to rotate the auger. In another non-limiting embodiment, the upper parts of each of the walls that make the narrow cavities and the upper part of the auger are at different distances.

In contrast, EP '342, as best shown in Figs. 2, 3, and 5, merely describes walls of the mixing chamber (1) at identical angles to the floor as seen from the direction of travel. Nowhere in EP '342 are first and second walls that are substantially parallel to the direction of travel disclosed as being at dissimilar angles relative to the floor. Accordingly, Applicant respectfully submits that EP '342 fails to anticipate amended Claim 1.

Claims 2, 3, 5, 6, and newly added Claim 28 depend, directly or indirectly, from amended Claim 1. Accordingly, Applicant respectfully submits that Claims 2, 3, 5, 6, and newly added Claim 28 patentably distinguish over EP '342 for at least the same reasons as amended independent Claim 1, and Applicant respectfully submits that the rejection of Claims 1-3 and 5-6 is overcome.

Amended independent Claims 7 and 15 recite substantially similar features to those discussed above regarding amended Claim 1. Accordingly, Applicant respectfully submits that amended independent Claims 7 and 15 patentably distinguish over EP '342 for at least the same reasons as amended independent Claim 1.

Claims 8, 9, 13, 14, 26 and newly added Claim 29 depend from amended independent Claim 7. Claims 16, 17, 27, and newly added Claims 30 and 31 depend from amended independent Claim 15. Accordingly, Applicant respectfully submits that dependent Claims 8, 9, 13, 14, 16, 17, 26, 27, and 29-31 patentably distinguish over EP '342 for at least the same reasons as amended independent Claims 7 and 15.

Regarding the rejection of Claim 15 as anticipated by EP '027, that rejection is respectfully traversed by the present response.

Amended Claim 15 recites, in part:

an auger, including an upper end unsupported by external supports and a lower end, disposed within said enclosure, said auger having an axis of rotation extending substantially vertically through the floor,

said wall further including a first side and a second side positioned on opposing sides of the enclosure, said first side and said second side being disposed substantially parallel to a direction of travel of the mixing apparatus,

a distance between said axis of rotation and an upper part of said first side of said wall being shorter than a distance between said axis of rotation and an upper part of said second side of said wall as viewed from the direction of travel.

Accordingly, no external supports are used to support the upper end of the auger. One benefit of this arrangement is that feed can be dropped into the container without obstruction.

In contrast, EP '027 describes, as shown in Figs. 1, 3, 4, and 6, two rotors (6) disposed side by side in a container (11). EP '027 further describes support (12) connected to the top of each rotor (6) to stabilize the rotor. Nowhere does EP '027 disclose that the rotors are left unsupported at their upper ends. Accordingly, Applicant respectfully submits that the rejection of Claim 15 as anticipated by EP '027 is overcome.

As Claims 16 and 27 and newly added Claims 30 and 31 depend from amended independent Claim 15, Applicant respectfully submits that the Claims 16, 27, 30, and 31 patentably distinguish over EP '027 for at least the same reasons as amended independent Claim 15.

Regarding the rejection of Claims 15, 16, 22, and 27 as anticipated by Wosmek, that rejection is respectfully traversed by the present response.

As discussed above regarding the rejection of Claims 15, 16, and 27 as anticipated by EP '027, amended independent Claim 15 recites that the axis of rotation has a different distance from the upper part of the first side than from the upper part of the second side as viewed from the direction of travel. Further, the auger is unsupported by external supports at its upper end.

Applicant respectfully submits that Wosmek, like EP '027, fails to disclose an auger left unsupported at its upper end. Rather, as shown in Figs. 1 and 2, Wosmek describes vertical conveyor (23) enclosed in sleeve (25) from the top of the vertical conveyor (23) to the area of the horizontal conveyor (17).¹ Thus, the vertical conveyor (23) is supported at its top. Accordingly, Applicant respectfully submits that the rejection of Claim 15 as anticipated by Wosmek is overcome for at least the reasons discussed above.

Claims 16, 22, 27, 30, and 31 depend from amended independent Claim 15. Accordingly, Applicant respectfully submits that Claims 16, 22, 27, 30, and 31 patentably distinguish over Wosmek for at least the same reasons as amended independent Claim 15.

Newly added independent Claim 32 recites, in part:

a wall extending away from said floor...
said wall further including a first side and a second side positioned on opposing sides of the enclosure, and a third side and a fourth side positioned on opposing sides of the enclosure, each of the first and second sides being nearer to the auger than each of the third and fourth sides, and each of said first and second sides being disposed at dissimilar angles relative to said floor.

Accordingly, the first and second sides are closer to the auger than are the third and fourth sides. Further, the first and second sides are disposed at dissimilar angles relative to the floor.

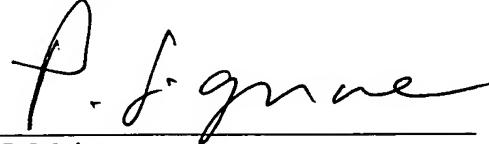
In contrast, to the extent any of the cited references describes first and second sides of a wall that are at dissimilar angles with respect to the floor of a container, the sides are not closer to an auger than are third and fourth sides of the wall. Accordingly, Applicant respectfully submits that newly added independent Claim 32 patentably distinguishes over the cited references for at least the reasons discussed above.

¹ Wosmek, col. 2, lines 9-20.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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